VERSION: The version of this Message Mapping Guide is Version 1.1 Dated January 20, 2009.

"This artifact is considered to be a technical document. Please contact PHINTech@cdc.gov, copying the NEDSS team at NEDSS@cdc.gov for assistance with this artifact."

This Message Mapping Guide describes the content and message mapping specifications for the set of data elements used to communicate information to meet the requirements for Arboviral Human Case Notifications to CDC. The intended audiences for this document are the state/local and CDC programs and other public health related organizations interested in using the HL7 V2.5 case notification message specification for transmitting their data elements to CDC.

## References

National Condition Reporting, Notifiable Events and Reporting Mechanisms for 2009, Division of Integrated Surveillance Systems and Services, National Center for Public Health Informatics, Centers for Disease Control and Prevention, June 2009.

National Notification Message Structure Specification version 2.0 is used to inform the mapping methodology for this guide. The ORU^R01 - Unsolicited Observation Message is the HL7 standard message used to pass the Nationally Notification responsible Condition Report message. The National Notification message is used to convey a limited data set of investigation/surveillance information to meet national reporting requirements, where CDC is the only receiver. This document specifies the structure and methodology for the use of the Health Level 7 (HL7) Version 2.5 Unsolicited Result Message (ORU^R01) that supports the electronic interchange of any Nationally Notifiable Condition message from public health entities to the CDC.

| Column                       | Description   |
|------------------------------|---|
| Program Variables Column Hea | adings  |
| PHIN Variable ID             | PHIN data element identifier drawn from the coding system PH_PHINQuestions_CDC.   |
| Label                        | Short name for the data element, which is passed in the message.  |
| Description                  | Description of the data element. It may not match exactly with the description in PHIN Questions, because there may be local variations on the description that do not change the basic concept being mapped to the PHIN Question identifier.   |
| Data Type                    | Data type for the variable response expected by the program area. Data Types are Coded, Numeric, Date or Date/time, and Text.   |
| CDC Priority                 | R - Required - Mandatory for sending the message. If data element is not present, the message will error out. P - Preferred - This is an optional variable and there is no requirement to send this information to CDC. However, if this variable is already being collected by the state/territory or if the state/territory is planning to collect this information because it is deemed important for your own programmatic needs, CDC would like this information sent. CDC preferred variables are the most important of the optional variables to be earmarked for CDC analysis/assessment, even if sent from a small group of states. O - Optional - This is an optional variable and there is no requirement to send this information to CDC. This variable is considered nice-to-know if the state/territory already collects this information or is planning to collect this information, but has a lower level of importance to CDC than the preferred classification of optional data elements. |
| May Repeat                   | Indicator whether the response to the data element may repeat. "Y" in the field indicates that it may repeat. If the response does not repeat, the field is not populated or contains "N". Data elements that repeat require special processing.  |
| Value Set Name               | Name of the pre-coordinated value set in PHIN-VADS from which the response is drawn. The value sets and coding systems are accessible via the Public Health Information Network Vocabulary Access and Distribution Services. To obtain the valid code sets for the <b>Arboviral Human</b> implementation message mapping guide, complete the following steps:  1. Go to http://phinvads.cdc.gov.  2. Click on the <b>Views</b> hyperlink  3. Enter <b>Arboviral Human</b> in the lookup box and press the Search Views button.  4. Click on <b>Details</b> next to Arboviral Human Case Notification to obtain the valid code sets.   |
| Value Set Code               | Code for the pre-coordinated value set in PHIN-VADS from which the response is drawn. The value sets and coding systems are accessible via the Public Health Information Network Vocabulary Access and Distribution Services. To obtain the valid code set for the <b>Arboviral Human</b> implementation message mapping guide, complete the following steps:  1. Go to http://phinvads.cdc.gov.  2. Click on the <b>Views</b> hyperlink  3. Enter <b>Arboviral Humani</b> the lookup box and press the Search Views button.  4. Click on <b>Details</b> next to Arboviral Human Case Notification to obtain the valid code set.  |
| Message Mapping Methodolog   |   |
| Message Context              | Specific HL7 segment and field mapping for the element.   |
| HL7 Data Type                | HL7 data type used by PHIN to express the variable. Datatypes expected are CWE, SN, TS, ST, TX, XPN, XTN, or XAD, depending on the type of data being passed.   |
| HL7 Optionality              | Indicates if the field is required, optional, or conditional in a segment. The only values that appear in the Message Mapping are:  R – Required. Must always be populated O – Optional. May optionally be populated.   |
| Implementation Notes         | Related implementation comments.  |
|                              |   |

Arboviral 1 of 10

| PHIN<br>Variable ID | Label/Short Name         | Description   | Data Type | CDC<br>Priority | May<br>Repeat | Value Set Name  | Value Set Code       | HL7 Message Context           | HL7 Data<br>Type | HL7<br>Optionalit | HL7 Implementation<br>Notes   |
|---------------------|--------------------------|---|-----------|-----------------|---------------|-----------------|----------------------|-------------------------------|------------------|-------------------|---|
| NOT108              | Notification ID          | The unique identifier for the notification record.  | Text      | R               |               |                 |                      | MSH-10-Message Control ID.    | ST               | R                 | If notification ID is not unique, a timestamp may be appended. No UID or label is passed in the message.  |
| NOT114              | Receiving<br>Application | CDC Receiving Application for this message.   | OID       | R               |               |                 |                      | MSH-5 Receiving Application.  | HD               | R                 | Literal Value:<br>'CDC^2.16.840.1.114222.4<br>.3.2.3^ISO'   |
| NOT115              | Message Profile ID       | First instance is the reference to the structural specification used to validate the message. Second instance is the reference to the PHIN Message Mapping Guide from which the content is derived.                         | Text      | R               | Y/2           |                 |                      | MSH-21-Message Profile ID.    | EI               | R                 | First instance literal value:<br>'NND_ORU_v2.0^PHINPr ofileID^2.16.840.1.114222.<br>4.10.3^ISO' Second instance literal value:<br>'Arbo_Case_Map_v1.0^PH INMsgMapID^2.16.840.1.1<br>14222.4.10.4^ISO'.  |
| DEM197              | Local patient ID         | The local ID of the patient/entity.   | Text      | R               |               |                 |                      | PID-3-Patient Identifier List | СХ               | R                 | PID-3.1-ID Number is the local Subject ID from the sending system's internally assigned Subject id; PID-3.4-Assigning Authority format <localid&oid&iso> Does not pass Variable ID or label.</localid&oid&iso>  |
| DEM100              | Patient name type        | Name is not requested by the program, but the Patient Name field is required to be populated for the HL7 message to be valid. Have adopted the HL7 convention for processing a field where the name has been removed for de | Coded     | R               | Y/2           | Name Type (HL7) | PHVS_NameType_HL7_2x | PID-5.7-Patient Name Type     | XPN              | R                 | Literal value:  ~^^^^S   Patient Name Type is passed in the second instance as HL7 reserves the first instance of the name field for Legal Name.  |
| INV168              | Local record ID          | Sending system-assigned local ID of the case investigation with which the subject is associated.  | Text      | R               |               |                 |                      | OBR-3-Filler Order Number     | EI               | R                 | OBR-3.1 is the internally assigned case/investigation ID. OBR-3.3 is the OID for sending application as assigning authority. OBR-3.4 is the literal value: 'ISO'. The same value is used for each OBR segment, and the UID and label are not passed in the message. |

Arboviral 2 of 10

| PHIN        | Label/Short Name     | Description   | Data Type | CDC      | May    | Value Set Name                    | Value Set Code                     | HL7 Message Context                                | HL7 Data | HL7        | HL7 Implementation  |
|-------------|----------------------|---|-----------|----------|--------|-----------------------------------|------------------------------------|--|----------|------------|---|
| Variable ID |                      |   |           | Priority | Repeat |                                   |                                    |  | Type     | Optionalit | Notes   |
| NOT099      | Subject Type         | Type of subject for the notification. "Person",<br>"Place/location", or "Non-Person Living<br>Subject" are the appropriate subject types for<br>Notifications to CDC.   | Coded     | R        |        | Notification Section Header       | PHVS_NotificationSectionHeader_CDC | First OBR Segment-OBR-4-<br>Universal Service ID.  | CE       | R          | Literal value: 'PERSUBJ^Person Subject^CDCPHINVS'   |
| NOT101      | Notification Type    | Type of notification. Notification types are "Individual Case", "Environmental", "Summary", and "Laboratory Report".  | Coded     | R        |        | Notification Section Header       | PHVS_NotificationSectionHeader_CDC | Second OBR Segment-OBR-4-<br>Universal Service ID. | CE       | R          | Literal Value: 'NOTF^Individual Case Notification^CDCPHINVS' No UID or label is passed in the message.  |
| NOT103      | Date First Submitted | Date the notification was first sent to CDC.<br>This value does not change after the original<br>notification.  | Date/time | R        |        |                                   |                                    | OBR-7-Observation Date/time.                       | TS       | R          | The same value is used for each OBR segment, and the UID and label are not passed in the message.   |
| NOT106      | Date of Report       | Date/time this version of the notification was sent. It will be the same value as NOT103 for the original notification. For updates, this is the update/send date/time. | Date/time | R        |        |                                   |                                    | OBR-22-Result Report/Status<br>Chg Date/time.      | TS       | R          | The same value is used for each OBR segment, and the UID and label are not passed in the message.   |
| INV169      | Condition Code       | Condition or event that constitutes the reason the notification is being sent.  | Coded     | R        |        | Virus Type (Arboviral<br>Disease) | PHVS_VirusType_ArboviralDisease    | OBR-31-Reason for Study.                           | CE       | R          | This field should be populated using the standardized vocabulary from PHIN VADS PHVS_VirusType_Arbovira IDisease Value Set Code. The data in INV169 will match the data populated for ARB001.               |
|             |                      |   |           |          | l      | Subject-F                         | l<br>Related                       | "  |          | l          |   |
| DEM115      | Birth Date           | Date of birth in YYYYMMDD format  | Date      | Р        |        |                                   |                                    | PID-7-Date/Time of Birth                           | TS       | 0          | The UID and label are not passed in the message.  |
| DEM113      | Patient's sex        | Patient's current sex.  | Coded     | Р        |        | Sex (MFU)                         | PHVS_Sex_MFU                       | PID-8-Administrative Sex                           | IS       | 0          | The UID and label are not passed in the message.  |
| DEM152      | Race Category        | Field containing one or more codes that broadly refer to the patient's race(s).  ArboNet specific note: Race Category does not repeat for this interface.               | Coded     | R        |        | Race Category                     | PHVS_RaceCategory_CDC              | PID-10-Race  | CE       | 0          | To send an "Unknown" because the application allows Unknown to be selected (that is, not as a default value): PID-10 would appear as  UNK^Unknown^NULLFL   The UID and label are not passed in the message. |

Arboviral 3 of 10

| PHIN        | Label/Short Name                   | Description   | Data Type | CDC      | May      | Value Set Name                     | Value Set Code                         | HL7 Message Context                                     | HL7 Data | HL7             | HL7 Implementation  |
|-------------|------------------------------------|---|-----------|----------|----------|------------------------------------|--|---|----------|-----------------|---|
| Variable ID |                                    |   |           | Priority | Repeat   |                                    |  |   | Type     | Optionalit<br>v | Notes   |
| DEM165      | Patient Address<br>County          | County of residence of the subject.   | Coded     | Р        |          | County                             | PHVS_County_FIPS_6-4                   | PID-11.9-Patient Address -<br>County                    | IS       | 0               | The entire address construct (PID-11) may repeat per HLT but only expecting the first instance to be populated and parsed.  |
| DEM162      | Patient Address<br>State           | State of residence of the subject.  | Coded     | 0        |          | State                              | PHVS_State_FIPS_5-2                    | PID-11.4-Patient Address -<br>State                     | ST       | 0               | The entire address construct (PID-11) may repeat per HL7 but only expecting the first instance to be populated and parsed.  |
| DEM163      | Patient Address Zip<br>Code        | ZIP Code of residence of the subject.   | Text      | 0        |          |                                    |  | PID-11.5-Patient Address -<br>Postal Code               | ST       | 0               | The entire address construct (PID-11) may repeat per HL7 but only expecting the first instance to be populated and parsed.  |
| DEM155      | Ethnic Group Code                  | Ethnic origin or ethnicity is based on the individual's self-identity of the patient as Hispanic or Latino; choose one value from the list. | Coded     | Р        |          | Ethnicity Group                    | PHVS_EthnicityGroup_CDC                | PID-22-Ethnic Group                                     | CE       | 0               | To send an "Unknown" because the application allows Unknown to be selected (that is, not as a default value): PID-22 would appear as  UNK^Unknown^NULLFL   The UID and label are not passed in the message. |
|             |                                    |   |           |          |          | 2 P                                |  |   |          |                 |   |
| NOT109      | State                              | State reporting the notification.   | Coded     | R        | <u> </u> | Case-Re                            | PHVS State FIPS 5-2                    | Observation/OBX Segment with                            | CWE      | 0               | ArboNet: Business   |
|             |                                    |   |           |          |          |                                    |  | this variable ID and label                              |          |                 | Process - message will fail if NOT109 is not populated with the numeric FIPS code.  |
| NOT116      | National Reporting<br>Jurisdiction | National jurisdiction reporting the notification to CDC.  | Coded     | R        |          | National Reporting<br>Jurisdiction | PHVS_NationalReportingJurisdiction_NND | Observation/OBX Segment with this variable ID and label | CWE      | 0               |   |
| INV173      | StateID                            | States use this field to link NEDSS investigations back to their own state investigations.  | Text      | R        |          |                                    |  | Observation/OBX Segment with this variable ID and label | ST       | 0               |   |
| INV128      | Hospitalized                       | Was patient hospitalized because of this event?   | Coded     | 0        |          | Yes No Unknown (YNU)               | PHVS_YesNoUnknown_CDC                  | Observation/OBX Segment with this variable ID and label | CWE      | 0               |   |
| INV137      | OnsetDate                          | Date of the beginning of the illness. Reported date of the onset of symptoms of the condition being reported to the public health system.   | Date      | 0        |          |                                    |  | Observation/OBX Segment with this variable ID and label | TS       | 0               | The first 4 digits of this field is used to derive the arb_year value used by the Arboviral program.  |
| INV145      | Fatality                           | Did the patient die from this illness or complications of this illness?   | Coded     | 0        |          | Yes No Unknown (YNU)               | PHVS_YesNoUnknown_CDC                  | Observation/OBX Segment with this variable ID and label | CWE      | 0               |   |

Arboviral 4 of 10

| PHIN<br>Variable ID | Label/Short Name | Description   | Data Type | CDC<br>Priority | May<br>Repeat | Value Set Name                   | Value Set Code  | HL7 Message Context                                     | HL7 Data<br>Type | HL7<br>Optionalit | HL7 Implementation<br>Notes  |
|---------------------|------------------|---|-----------|-----------------|---------------|----------------------------------|---|---|------------------|-------------------|--|
| INV146              | DateOfDeath      | The date and time the subject's death occurred.   | Date      | 0               |               |                                  |   | Observation/OBX Segment with this variable ID and label | TS               | 0                 |  |
| INV152              | ImportedFrom     | Indication of where the disease/condition was likely acquired.  | Coded     | 0               |               | Disease Acquired<br>Jurisdiction | PHVS_DiseaseAcquiredJurisdiction_NND                                  | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |  |
| INV153              | CountryOfOrigin  | If the disease or condition was imported, indicates the country in which the disease was likely acquired.   | Coded     | 0               |               | Country                          | PHVS_Country_3166-1  Observation/OBX Segmenthis variable ID and label |   | CWE              | 0                 |  |
| INV163              | CaseStatus       | Status of the case/event as suspect, probable, confirmed, or "not a case" per CSTE/CDC/ surveillance case definitions.                              | Coded     | R               |               | Case Classification Status       | PHVS_CaseClassStatus_NND  | Observation/OBX Segment with this variable ID and label | CWE              | 0                 | Valid Values: Confirmed Not a Case Probable Suspect Note: 'Unk - Unknown' is not a valid value for the Arboviral System. |
| INV178              | Pregnant         | Indicates whether the patient was pregnant at the time of the event.  | Coded     | 0               |               | Yes No Unknown (YNU)             | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |  |
| INV2001             | Age              | Patient age at time of case investigation   | Numeric   | 0               |               |                                  |   | Observation/OBX Segment with this variable ID and label | SN               | 0                 |  |
| INV2002             | AgeUnit          | Patient age units at time of case investigation   | Coded     | 0               |               | Age Unit                         | PHVS_AgeUnit_UCUM   | OBX-6-Units   | CE               | 0                 | Part of the INV2001<br>Observation/OBX<br>Segment.<br>The UID and label are not<br>passed in the message.                |
|                     |                  |   |           |                 |               | Abroviral Sp                     | <br>ecific Data   |   |                  |                   |  |
| ARB001              | Arbovirus        | Type of arbovirus the case was infected with.   | Coded     | R               |               | Virus Type (Arboviral Disease)   | PHVS_VirusType_ArboviralDisease                                       | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |  |
| ARB002              | ClinicalSyndrome | Clinical Syndrome is the type of clinical presentation the case had.  | Coded     | Р               |               | Clinical Syndrome<br>(Arbovirus) | PHVS_ClinicalSyndrome_Arbovirus                                       | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |  |
| ARB003              | LabAcquired      | Person fell ill with arboviral illness that was likely acquired due to work with infectious agents in a laboratory setting.                         | Coded     | Р               |               | Yes No Unknown (YNU)             | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |  |
| ARB004              | NonLabAcquired   | Non-Lab Occupationally Acquired. Indicates possible infection in an occupational setting that is not a laboratory.                                  | Coded     | Р               |               | Yes No Unknown (YNU)             | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |  |
| ARB005              | BloodDonor       | Person who fell ill with arboviral illness and reported that they had donated blood sometime within the last 30 days prior to onset.                | Coded     | Р               |               | Yes No Unknown (YNU)             | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |  |
| ARB006              | BloodTransfusion | Person who fell ill with arboviral illness and reported that they had received a blood transfusion sometime within the last 30 days prior to onset. | Coded     | R               |               | Yes No Unknown (YNU)             | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |  |

Arboviral 5 of 10

| PHIN<br>Variable ID  | Label/Short Name                    | Description   | Data Type | CDC<br>Priority | May<br>Repeat | Value Set Name         | Value Set Code  | HL7 Message Context  | HL7 Data<br>Type | HL7<br>Optionalit | HL7 Implementation |
|--|-------------------------------------|---|-----------|-----------------|---------------|------------------------|---|--|------------------|-------------------|--------------------|
| variable iD  |                                     |   |           | Priority        | Repeat        |                        |   |  | Type             | у                 | Notes              |
| ARB007   | OrganDonor                          | Person who fell ill with arboviral illness and reported that they had donated an organ sometime within the last 30 days prior to onset.                           | Coded     | R               |               | Yes No Unknown (YNU)   | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label                  | CWE              | Ö                 |                    |
| ARB008   | OrganTransplant                     | Person who fell ill with arboviral illness and reported that they had received an organ transplant sometime within the last 30 days prior to onset.               | Coded     | R               |               | Yes No Unknown (YNU)   | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label                  | CWE              | 0                 |                    |
| ARB009   | BreastFedInfant                     | Person who fell ill with arboviral illness and reported that they were breast feeding or breast fed prior to the illness onset.                                   | Coded     | R               |               | Yes No Unknown (YNU)   | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label                  | CWE              | 0                 |                    |
| ARB010   | InfectedInUtero                     | Infant that was born to a mother who had a WNV illness/infection during their pregnancy.  | Coded     | R               |               | Yes No Unknown (YNU)   | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label                  |                  |                   |                    |
| ARB011   | Published                           | Published indicator   | Coded     | R               |               | Yes No Indicator (HL7) | PHVS_YesNo_HL7_2x   | Observation/OBX Segment with this variable ID and label                  | CWE              | 0                 |                    |
| ARB012   | AFP                                 | Did the patient suffer Acute Flaccid Paralysis?   | Coded     | R               |               | Yes No Unknown (YNU)   | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label                  | CWE              | 0                 |                    |
| ARB013   | IdentifiedByBloodDo<br>norScreening | Donors who have been identified as having a WNV infection through routine blood donation screening by the blood collection agency. May or may not be symptomatic. | Coded     | R               |               | Yes No Unknown (YNU)   | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label                  |                  |                   |                    |
| ARB014   | DateOfDonation                      | Date of blood donation  | Date      | Р               |               |                        |   | Observation/OBX Segment with this variable ID and label                  | TS               | 0                 |                    |
| ARB015   | LabTestingBy                        | Information on whether the specimen was tested in public health labs or exclusively in commercial laboratories.   | Coded     | Р               |               | Public Private Lab     | PHVS_PublicPrivateLab_NND   | Observation/OBX Segment with this variable ID and label                  | CWE              | 0                 |                    |
| ARB016   | RiskFactorDiabetes                  | Before your infection, did a health care provider ever tell you that you had diabetes?  | Coded     | Р               |               | Yes No Unknown (YNU)   | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label                  | CWE              | 0                 |                    |
| ARB017   | RiskFactorHypertens ion             | Before your infection, did a health care provider ever tell you that you had high blood pressure (hypertension)?  | Coded     | Р               |               | Yes No Unknown (YNU)   | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label                  | CWE              | 0                 |                    |
| ARB018   | RiskFactorHeartAtta<br>ck           | Before your infection, did a health care provider ever tell you that you had heart attack (myocardial infarction)?  | Coded     | Р               |               | Yes No Unknown (YNU)   | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label                  | CWE              | 0                 |                    |
| ARB019   | RiskFactorCoronary<br>Artery        | Before your infection, did a health care provider ever tell you that you had angina or coronary artery disease?   | Coded     | Р               |               | Yes No Unknown (YNU)   | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label                  | CWE              | 0                 |                    |
| ARB020   | RiskFactorCHF                       | Before your infection, did a health care provider ever tell you that you had congestive heart failure (CHF)?  | Coded     | Р               |               | Yes No Unknown (YNU)   | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label                  | CWE              | 0                 |                    |
| ARB021   | RiskFactorStroke                    | Before your infection, did a health care provider ever tell you that you had a stroke (CVA)?  | Coded     | Р               |               | Yes No Unknown (YNU)   | ) PHVS_YesNoUnknown_CDC Observation/OBX Segment with this variable ID and label |  | 0                |                   |                    |
| ARB022   | RiskFactorCOPD                      | Before your infection, did a health care provider ever tell you that you had chronic obstructive pulmonary disease (COPD)?  | Coded     | Р               |               | Yes No Unknown (YNU)   | PHVS_YesNoUnknown_CDC   | esNoUnknown_CDC  Observation/OBX Segment with this variable ID and label |                  | 0                 |                    |
| ARB023 RiskFactorLiverDise ase RiskFactorLiverDise before your infection, did a health care provider ever tell you that you had chronic liver disease? Coded P Yes No Unknown (YNU) PHVS_YesNoUnknown_CDC Observation/OBX Segment this variable ID and label |                                     | Observation/OBX Segment with this variable ID and label   | CWE       | 0               |               |                        |   |  |                  |                   |                    |

Arboviral 6 of 10

| PHIN<br>Variable ID | Label/Short Name                   | Description   | Data Type | CDC<br>Priority | May<br>Repeat | Value Set Name                | Value Set Code  | HL7 Message Context                                     | HL7 Data<br>Type | HL7<br>Optionalit | HL7 Implementation |
|---------------------|------------------------------------|---|-----------|-----------------|---------------|-------------------------------|---|---|------------------|-------------------|--------------------|
| variable ib         |                                    |   |           | Priority        | кереаі        |                               |   |   | туре             | у                 | Notes              |
| ARB024              | RiskFactorKidneyDis ease           | Before your infection, did a health care provider ever tell you that you had kidney/renal disease or failure?                     | Coded     | Р               |               | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |                    |
| ARB025              | RiskFactorAlcoholis<br>m           | History of alcoholism?  | Coded     | Р               |               | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |                    |
| ARB026              | RiskFactorBoneMarr<br>owTrans      | History of bone marrow transplant   | Coded     | Р               |               | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |                    |
| ARB027              | RiskFactorSolidOrga<br>nTransplant | History of solid organ transplant?  | Coded     | Р               |               | Yes No Unknown (YNU)          | es No Unknown (YNU) PHVS_YesNoUnknown_CDC Observation/OBX Segment with this variable ID and label |   | CWE              | 0                 |                    |
| ARB028              | RiskFactorOrgansTr<br>ansplanted   | What organ was transplanted? (may be multiple organs)   | Coded     | Р               | Y             | Transplant Organ              | PHVS_TransplantOrgan_CDC  | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |                    |
| ARB029              | RiskFactorOrganTra<br>nsplantYear  | What year was the transplant? (may be multiple years for multiple transplants)  | Date      | Р               | Y             |                               |   | Observation/OBX Segment with this variable ID and label | TS               | 0                 |                    |
| ARB030              | RiskFactorCancer                   | History of cancer?  | Coded     | Р               |               | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |                    |
| ARB031              | RiskFactorCancerTy<br>pe           | If the patient reported cancer, what type(s)? (may be one or more cancer types)   | Coded     | Р               | Y             | Cancer Type                   | PHVS_CancerType_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |                    |
| ARB032              | RiskFactorCancerYe ar              | What year was cancer diagnosed? (may be multiple years)   | Date      | Р               | Y             |                               |   | Observation/OBX Segment with this variable ID and label | TS               | 0                 |                    |
| ARB033              | RiskFactorCancerTr eatment         | Are you currently being treated for cancer?   | Coded     | Р               |               | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |                    |
| ARB034              | RiskFactorImmuneS uppressed        | At the time you were diagnosed with West Nile virus infection, were you immune suppressed?  | Coded     | Р               |               | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |                    |
| ARB035              | RiskFactorImmuneC ondition         | If the patient reported being immune suppressed, what is the immune condition?  | Coded     | Р               |               | Immunosuppressed<br>Condition | PHVS_ImmunosuppressedCondition_CDC  | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |                    |
| ARB036              | RiskFactorChemo                    | At the time you were diagnosed with West Nile virus infection, were you undergoing chemotherapy?                                  | Coded     | Р               |               | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |                    |
| ARB037              | RiskFactorOtherCan cer             | At the time you were diagnosed with West Nile virus infection, were you undergoing other treatments for cancer?                   | Coded     | Р               |               | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |                    |
| ARB038              | RiskFactorHemodial ysis            | At the time you were diagnosed with West Nile virus infection, were you undergoing hemodialysis?                                  | Coded     | Р               |               | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |                    |
| ARB039              | RiskFactorOtherKidn<br>eyTreatment | At the time you were diagnosed with West Nile virus infection, were you undergoing other treatments for kidney disease?           | Coded     | Р               |               | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |                    |
| ARB040              | RiskFactorSteroids                 | At the time you were diagnosed with West Nile virus infection, were you receiving oral or injected steroids?                      | Coded     | Р               |               | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |                    |
| ARB041              | RiskFactorInsulin                  | At the time you were diagnosed with West Nile virus infection, were you receiving insulin or other medications to treat diabetes? | Coded     | Р               |               | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC   | Observation/OBX Segment with this variable ID and label | CWE              | 0                 |                    |

Arboviral 7 of 10

## Arboviral Human Case Notification Message Mapping Guide

| PHIN<br>Variable ID | Label/Short Name                  | Description   | Data Type | CDC<br>Priority | May<br>Repeat | Value Set Name         | Value Set Code        | HL7 Message Context                                     | HL7 Data<br>Type | HL7<br>Optionalit<br>V | HL7 Implementation<br>Notes |
|---------------------|-----------------------------------|---|-----------|-----------------|---------------|------------------------|-----------------------|---|------------------|------------------------|-----------------------------|
| ARB042              | RiskFactorHypertens ionMeds       | At the time you were diagnosed with West Nile virus infection, were you receiving medications to treat high blood pressure?           | Coded     | Р               |               | Yes No Unknown (YNU)   | PHVS_YesNoUnknown_CDC | Observation/OBX Segment with this variable ID and label | CWE              | Ō                      |                             |
| ARB043              | RiskFactorCoronary<br>ArteryMeds  | At the time you were diagnosed with West Nile<br>virus infection, were you receiving medications<br>to treat coronary artery disease? | Coded     | Р               |               | Yes No Unknown (YNU)   | PHVS_YesNoUnknown_CDC | Observation/OBX Segment with this variable ID and label | CWE              | 0                      |                             |
| ARB044              | RiskFactorCongestiv<br>eHeartMeds | At the time you were diagnosed with West Nile virus infection, were you receiving medications to treat congestive heart failure?      | Coded     | Р               |               | Yes No Unknown (YNU)   | PHVS_YesNoUnknown_CDC | Observation/OBX Segment with this variable ID and label | CWE              | 0                      |                             |
| ARB045              | RiskFactorImmuneS uppressMeds     | At the time you were diagnosed with West Nile virus infection, were you receiving medications that suppress the immune system?        | Coded     | Р               |               | Yes No Unknown (YNU)   | PHVS_YesNoUnknown_CDC | Observation/OBX Segment with this variable ID and label | CWE              | 0                      |                             |
| ARB046              | RiskFactorPatient                 | Is the patient the source of the medical information?   | Coded     | Р               |               | Yes No Indicator (HL7) | PHVS_YesNo_HL7_2x     | Observation/OBX Segment with this variable ID and label | CWE              | 0                      |                             |
| ARB047              | RiskFactorProvider                | Is the provider the source of the medical information?  | Coded     | Р               |               | Yes No Indicator (HL7) | PHVS_YesNo_HL7_2x     | Observation/OBX Segment with this variable ID and label | CWE              | 0                      |                             |
| ARB048              | RiskFactorFamily                  | Is the patient's family the source of the medical information?  | Coded     | Р               |               | Yes No Indicator (HL7) | PHVS_YesNo_HL7_2x     | Observation/OBX Segment with this variable ID and label | CWE              | 0                      |                             |
| ARB049              | RiskFactorMedicalR ecord          | Is the medical record the source of the medical information?  | Coded     | Р               |               | Yes No Indicator (HL7) | PHVS_YesNo_HL7_2x     | Observation/OBX Segment with this variable ID and label | CWE              | 0                      |                             |

Arboviral 8 of 10

| Date       | Version              | Description  |
|------------|----------------------|--|
| 3/12/2008  | DRAFT                | Revised INV169 Condition Code field to describe that the Arbovirus will also be sent in this field. The virus is sent in the "local triplet", because an event code is not assigned at the time these messages are shipped to ArboNET. Passing the virus in the Condition Code field is known to duplicate the Arbovirus observation, but OBR-31 where the event code is passed is a mandatory field for Case Notification, and the message will error out if there is nothing in the field. |
| 10/29/2008 | Draft .8             | Notification Structure Tab, Added Data Element NOT114 Receiving Application. Made this generic - did not refer to CDS since the workflow is back out to the ArboNet system. Left the literal value to be used "TBD".   |
| 10/29/2008 | Draft .8             | Notification Structure Tab, Added NOT115 identifier to Message Profile ID row (formerly was N/A). Second instance literal value was amended to: 'Arbo_Case_Map_v1.0^PHINMsgMapID^2.16.840.1.114222.4.10.4^ISO', as the former component 1 value was too long.  |
| 11/10/2008 | Draft .8             | DEM113 on the Data Element Index was erroneously described as "birth sex". It was corrected to "current sex" as on the Subject-related tab.  |
| 12/29/2008 | Final<br>Version 1.0 | Generic Obs tab: Added this verbiage to the Implementation Notes for INV165 and INV166, which are generic reporting elements which are shaded and not used for ArboNet reporting: "MMWR Week and MMWR Year are not data elements of interest for Arboviral mapping guide. These data will be determined by the ArboNet system."  |
| 12/29/2008 | Final<br>Version 1.0 | Subject-related tab: DEM165 - Patient Address County. Under 'Implementation Notes' columns added: 'Use 5 character numeric code from PHVS_County_FIPS_6-4'   |
| 12/29/2008 | Final<br>Version 1.0 | Data Element Index: DEM165 - Patient Address County. Under 'Valid Values' column added: 'FIPS 5 character numeric county codes".   |
| 12/29/2008 | Final<br>Version 1.0 | Notification Structure Tab, NOT114 Receiving Application: added the Literal Value 'CDC^2.16.840.1.114222.4.3.2.3^ISO' where the OID was formerly TBD.  |
| 12/29/2008 | Final<br>Version 1.0 | Generic and Notification Structure Tabs: Revised the Implementation Notes for INV169 Condition Code field.   |
| 1/13/2009  | Final<br>Version 1.0 | Removed the HL7 Repeats column from the Key and from the Mapping Methodology spreadsheets. This information was a duplicate of information contained in the Notification Message Specification/Profile.  |
| 1/13/2009  | Final<br>Version 1.0 | Added NOT116 National Reporting Jurisdiction to the Generic tab. It was already added as a required field on the Data Element Index, per DISSS/DPHSS instruction.  |
| 1/13/2009  | Final<br>Version 1.0 | Data Element Index: Second instance literal value was amended to: 'Arbo_Case_Map_v1.0^PHINMsgMapID^2.16.840.1.114222.4.10.4^ISO', from 'Gen_Case_Map_v1.0^PHINMsgMapID^2.16.840.1.114222.4.10.4^ISO', as shown on the Notification Structure tab.  |
| 1/16/2009  | Final<br>Version 1.0 | Changed the name of the guide from ArboNet to Arboviral Human Case Reporting as directed by DISSS.   |
| 1/16/2009  | Final<br>Version 1.0 | Removed the empty Associated Lab Report and Associated Vaccine Record tabs. Introduction states those tabs are not used for this message.  |
| 1/22/2009  | Final<br>Version 1.0 | Data Element Index and Arboviral Obs mapping tab: Removed the"Y" in the May Repeat column for ARB002 ClinicalSyndrome (Does not allow repeats).  |
| 1/22/2009  | Final<br>Version 1.0 | Data Element Index and Subject-Related mapping tab: DEM152 Race Category - CDC Priority is Required and May Repeat is now blank. ArboNet does not allow repeats for race category.   |

Revisions 9 of 10

## Arboviral Human Case Notification Message Mapping Guide

| Date       | Version              | Description  |
|------------|----------------------|--|
| 1/22/2009  | Final                | Data Element Index and Generic mapping tab: For NOT109 Reporting state, clarified that CDC       |
|            | Version 1.0          | is expecting the numeric FIPS state code.  |
|            |                      |  |
| 1/22/2009  | Final                | Subject Related Tab: Removed the Implementation Notes on DEM162 Patient Address State            |
|            | Version 1.0          | and DEM163 Patient Address Zip Code.   |
| 1/22/2009  | Final                | Generic Obs mapping: INV173 StateID – CDC Priority column changed from "Optional" to             |
|            | Version 1.0          | "Required" to make it consistent with the Data Element Index.                                    |
| 1/22/2009  | Final                | Generic Obs mapping: Added this Implementation Note for NOT109. "ArboNet: Business               |
|            | Version 1.0          | Process - message will fail if NOT109 is not populated with the numeric FIPS code."              |
| 1/22/2009  | Final                | Generic Obs mapping: The Label for INV168 Record ID is now "Local Record ID" to make it          |
|            | Version 1.0          | consistent with the Notification structure section.  |
| 6/12/2009  | Final                | Generic Obs mapping: NOT116 - National Reporting Jurisdiction: the Value Set Name changed        |
|            | Version 1.0          | from "Reporting Area (TB)" to National Reporting Jurisdiction.                                   |
| 6/12/2009  | Final                | Data Element Index and Generic mapping tab: NOT116 - National Reporting Jurisdiction: the        |
|            | Version 1.0          | Value Set Code changed from " PHVS_ReportingArea_TB)" to   |
|            |                      | PHVS_NationalReportingJurisdiction   |
| 10/13/2009 | Final                | Generic Obs. Tab INV163 - CaseStatus added Implementation Note: Valid Values -                   |
|            | Version 1.0          | Confirmed, Not a Case, Probable, and Suspect.  |
|            |                      | "Note: 'Unk - Unknown' is not a valid value for the Arboviral System."                           |
| 1/19/2010  | Final<br>Version 1.1 | Changed CDC Priority from (P) Preferred to (R) Required (Data Element Index, Arboviral Obs.)     |
| 1/19/2010  | Final                | Added Implementation Note for !NV137 OnSetDate to read "The first 4 digits of this field is used |
|            | Version 1.1          | to derive the arb_year value used by the Arboviral program."                                     |

Revisions 10 of 10